

Fig.2

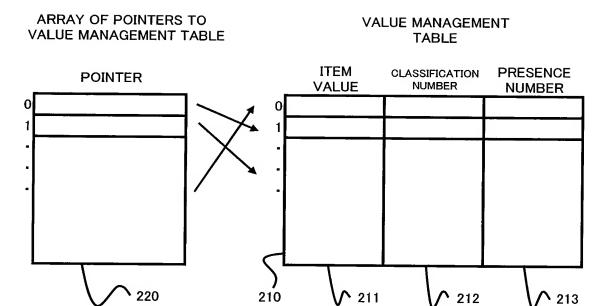


Fig.3

PMM

32-0

34-0

32-1

36-0

36-1

32-2



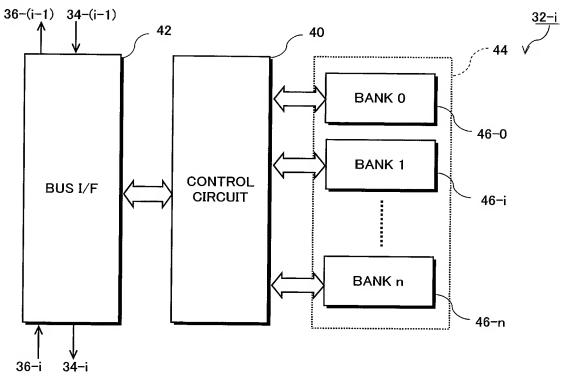


Fig.5

RECORD NUMBER	SEX	AGE	HEIGHT(cm)
0	FEMALE	3	78
1	MALE	1	82
2	FEMALE	2	69
3	FEMALE	1	82
4	MALE	3	91
5	FEMALE	1	76
6	FEMALE	1	78
7	FEMALE	2	84
8	MALE	3	87
9	FEMALE	3	80

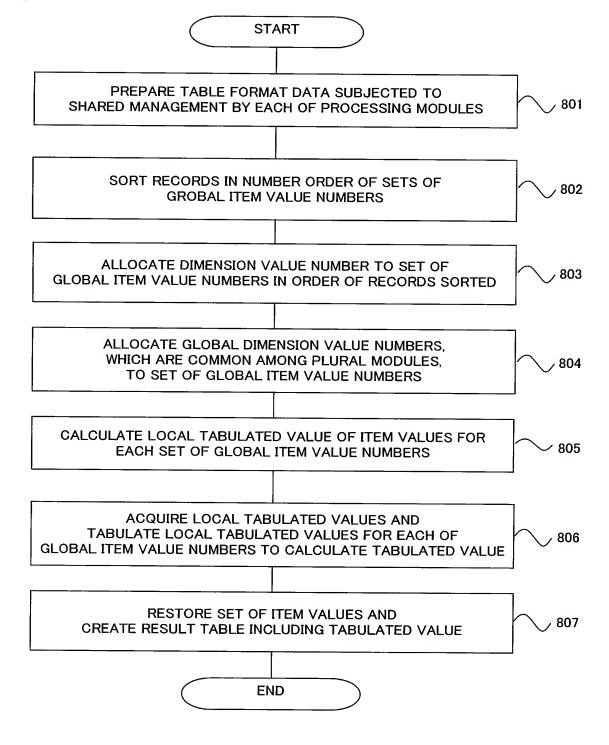
9/ 

Fig.6

Fig.7

[F				
HEIGHT (PMM-0)		VNo VL GVNo 0 0 82 0 4 1 1 1 91 1 7   ASCENDING ASCENDING ORDER	VNo VL GVNo 0 0 1 1 1 1 78 1 2 5 2 2 2 2 84 2 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	VNo VL GVNo 0 1 0 80 0 3 1 0 1 87 1 6 ASCENDING ASCENDING ORDER
AGE (PMM-0)	VNo VL GVNo 1 0 1 0 0 2 1 2 3 2 2 ASCENDING ASCENDING	VNo VL GVNo  0 0 0 0 0 0 1  1 1 1 3 1 2  ASCENDING ASCENDING ORDER	VNo VL GVNo  0 0 0 1 0 0  1 0 1 2 1 1 ASCENDING ASCENDING ORDER ORDER	VNo VL GVNo  0 0 0 ASCENDING ASCENDING ORDER ORDER
SEX (PMM-0)	VNo VL GVNo 0 1 0 MALE 0 0 1 6 1 FEMALE 1 1 2 1 ASCENDING ASCENDING ORDER	VNo VL GVNo  O 1  ASCENDING ASCENDING ORDER	VNo VL GVNo  0 0 0 OFEMALE 0 1  1 0 ASCENDING ASCENDING  2 0 ORDER ORDER	VNo
	GOrd OrdSet    0 0 0 0     1 1 1     2 2 2     ASCENDING ORDER	GOrd OrdSet  GOrd OrdSet  ASCENDING ORDER	GOrd OrdSet    GOrd OrdSet   G	GOrd OrdSet  GORD 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
OFFSET= 0 PMM-0	SEX AGE   HEIGHT   1	OFFSET= 3    SEX   AGE   HEIGHT     OFFMALE   1   82     MALE   3   91	OFFSET= 5	OFFSET= 8

Fig.8



GOrd OrdSet GOrd OrdSet OrdSet OrdSet ~ SORT BY SEX SORT BY SEX SORT BY SEX SORT BY SEX Gord GOrd 1 GOrd OrdSet GOrd OrdSet GOrd OrdSet OrdSet 0 0 2 SORT BY AGE SORT BY AGE SORT BY AGE SORT BY AGE Gord 0 1 1 1 1 ASCENDING ASCENDING ASCENDING ASCENDING ASCENDING GVNo GVNo ORDER ORDER ORDER ORDER 0 7 0 AGE (PMM-0) AGE (PMM-1) AGE (PMM-2) (PMM-3)ASCENDING ASCENDING ASCENDING ORDER ORDER ORDER က 0 0 0 0 ASCENDING ASCENDING ORDER ASCENDING ASCENDING ASCENDING ORDER ASCENDING ASCENDING ORDER GVNo GVNo ORDER GVNo GVNo ORDER 0 1 FEMALE 1 SEX (PMM-0) SEX (PMM-2) SEX (PMM-3) SEX (PMM-1 ASCENDING , ORDER 1 FEMALE 1 FEMALE 0 MALE 0 MALE 0 FEMALE 0 MALE ŝ ŝ Ŷ. 00 0 0 OrdSet OrdSet GOrd OrdSet GOrd OrdSet 0 8 ~ 0 0 ASCENDING ORDER ASCENDING ORDER ASCENDING ORDER ASCENDING ORDER Gord Gord 0 ~ 4 6 9 ∞ HEIGHT HEIGHT HEIGHT HEIGHT 78 82 69 82 91 82 88 9/ 84 PMM-0 PMM-1 PMM-2 PMM-3 AGE AGE AGE AGE OFFSET= 0 OFFSET= 3 OFFSET= 8 MALE 2 FEMALE 0 FEMALE FEMALE 1 FEMALE OFFEMALE 2 FEMALE MALE OFFSET= FEMALE MALE SEX SEX SEX

Fig.9

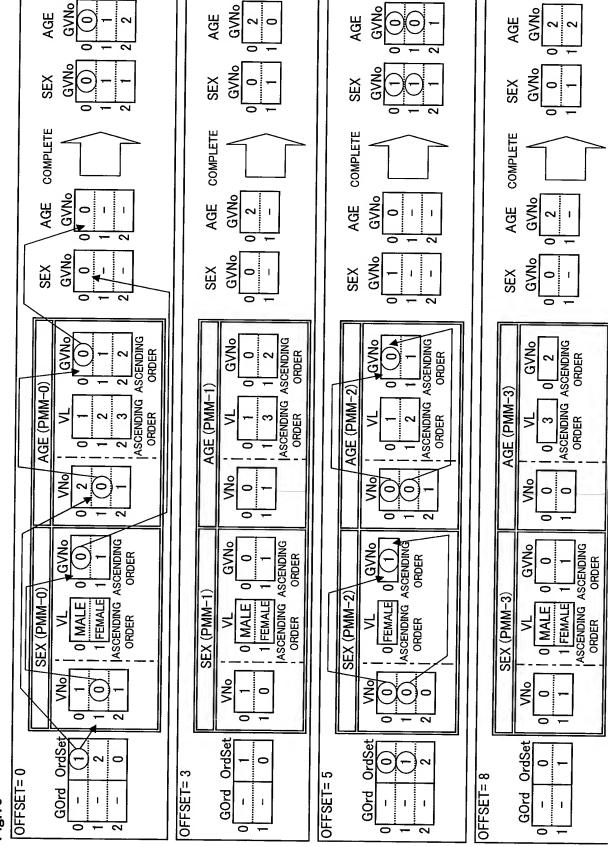


Fig.10

Fig.11

# CREATE LOCAL DIMENSION VALUE NUMBER LDimNo (ORDERING OF DIMENSIONS IN LOCAL) IF GVNo IS DIFFERENT

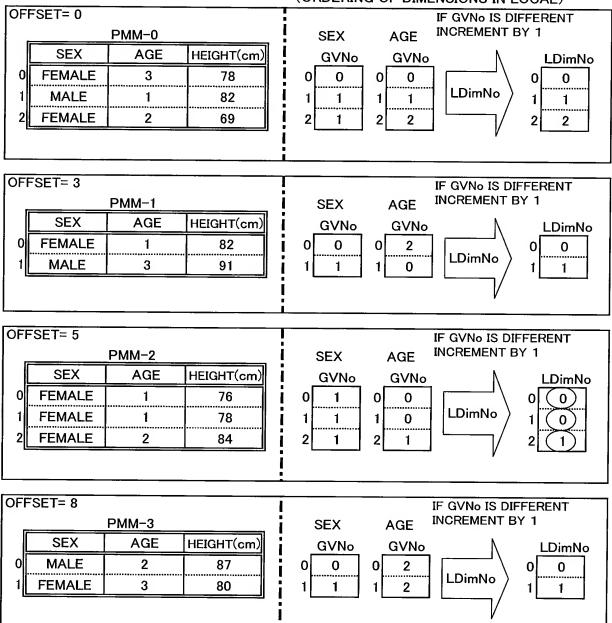


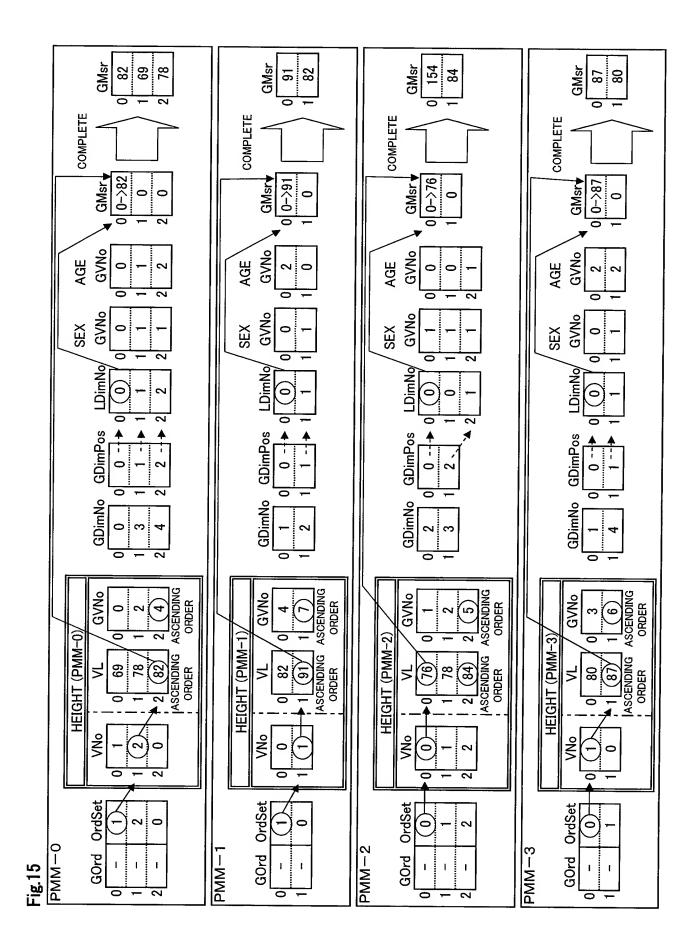
Fig.12

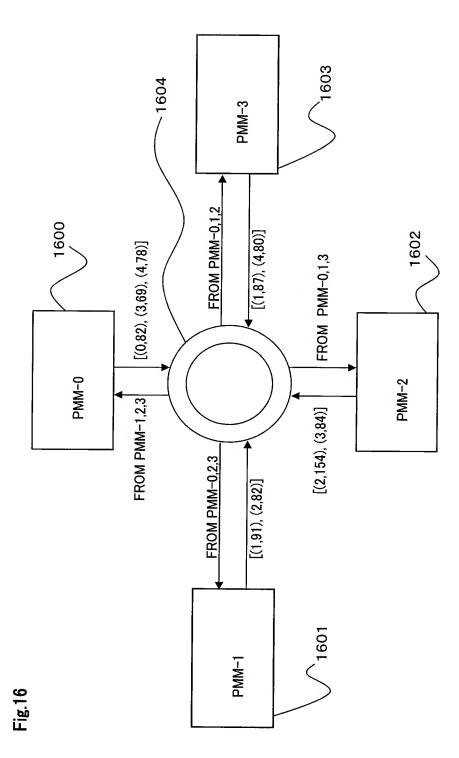
Fig.13

	LDimNo	GNo1	GNo2	GDimNo
	0	0	0	0
PMM-0	1	1	1	3
	2	1	2	4
PMM-1	0	0	2	1
	1	1	0	2
PMM-2	0	1	0	2
	1	1	1	3
PMM-3	0	0	2	1
	1	1	1	2

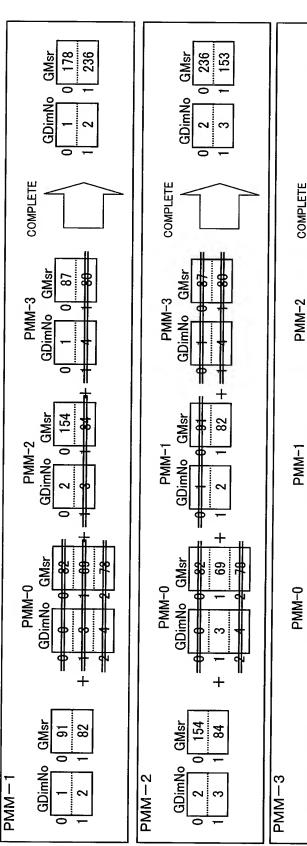
Fig.14

	GMsr	0 0	1 0	2 0			GMsr	0 0	1 0			GMsr	0 0	1 0				GMsr	0	1 0	]
SEX AGF	<u>0</u>	0 0 0 0	1 3 1 1 1 1 1 1 1 1	2 4 2 2 2 2 2 1 2 2		SEX AGE	<u>0</u>	_	1 1 2 1 1 1 1 1 1 0		SEX AGE	GDimNo GDimPos LDimNo GVNo GVNo	0 2 0 0 0 0 1 0 0	1 3 1 2 1 0 1 1 1 0	<b>1</b> 2 1 2 1 2 1		SEX AGE	<u>0</u>	0 0 0 0 4 0 0	1 4 1 1 1 1 1 1 2	
	HEIGHT	78	82	69			HEIGHT	82	91			HEIGHT	16	78	84			HEIGHT	87	80	
PMM-0	AGE	က	_	2		PMM-1	AGE		3		PMM-2	AGE	-	-	2		PMM-3	AGE	2	3	
OFFSET= 0	SEX	0 FEMALE	1 MALE	2 FEMALE	OFFSET= 3		SEX	0 FEMALE	1 MALE	OFFSET= 5		SEX	0 FEMALE	1 FEMALE	2 MALE	OFFSET= 8		SEX	0 MALE	1 FEMALE	



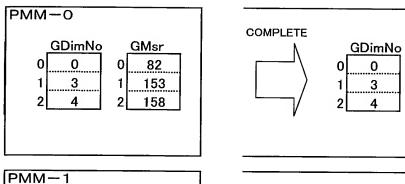


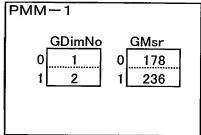
82 153 158 GMsr **GDimNo** COMPLETE 8 PMM-3 GDimNo GMsr PMM-2 GDimNo PMM-1 **GDimNo** 82 69 78 GMsr GDimNo PMM-0 Fig.17

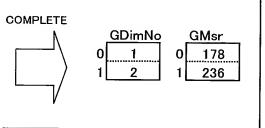


158 COMPLETE PMM-2 **GDimNo** GMsr 91 **GDimNo** GDimNo GMsr GMsr 80 GDimNo

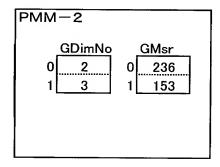
**Fig.18** 

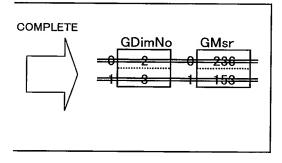


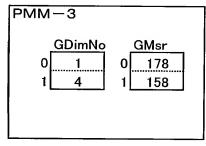


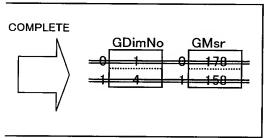


GMsr









GVNo ASCENDING ASCENDING ORDER ORDER ASCENDING ASCENDING ORDER GVNo AGE AGE VNo 7 0 1 FEMALE 1 1
ASCENDING ASCENDING ORDER 0 MALE 0 0 1 FEMALE 1 1 ASCENDING ASCENDING ORDER ORDER GVNo SEX 닛 SEX 0 GVNo GVNo AGE AGE 7 GVN<sub>0</sub> GVNo SEX 0 SEX LDimNo LDimNo **GDimPos GDimPos** - 0 GMsr 82 153 158 178 236 GMsr **GDimNo GDimNo** 0 PMM-1 PMM-0 ω **4** 7

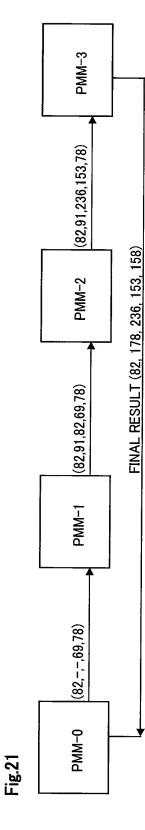
Fig.19

Fig.20

0 1 2	SEX	PMM-0 AGE 3 1 2	HEIGHT 78 82 69	SEX DIMENSION VALUE MALE FEMALE FEMALE	AGE DIMENSION VALUE  1 2 3	TABULATED VALUE 0 82 1 153 2 158
0 1	SEX	PMM-1 AGE 1 3	HEIGHT 82 91	SEX DIMENSION VALUE MALE FEMALE	AGE DIMENSION VALUE  3 1	TABULATED VALUE 0 178 1 236

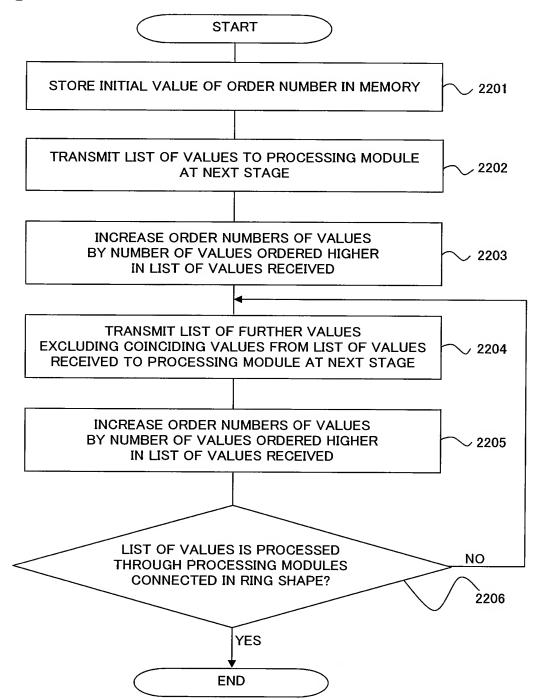
_	-	PMM-2	
	SEX	AGE	HEIGHT
0	FEMALE	1	76
1	FEMALE	1	78
2	FEMALE	2	84
		******	

		PMM-3	
	SEX	AGE	HEIGHT
0	MALE	3	87
1	FEMALE	3	80
			<del></del>



. '

Fig.22



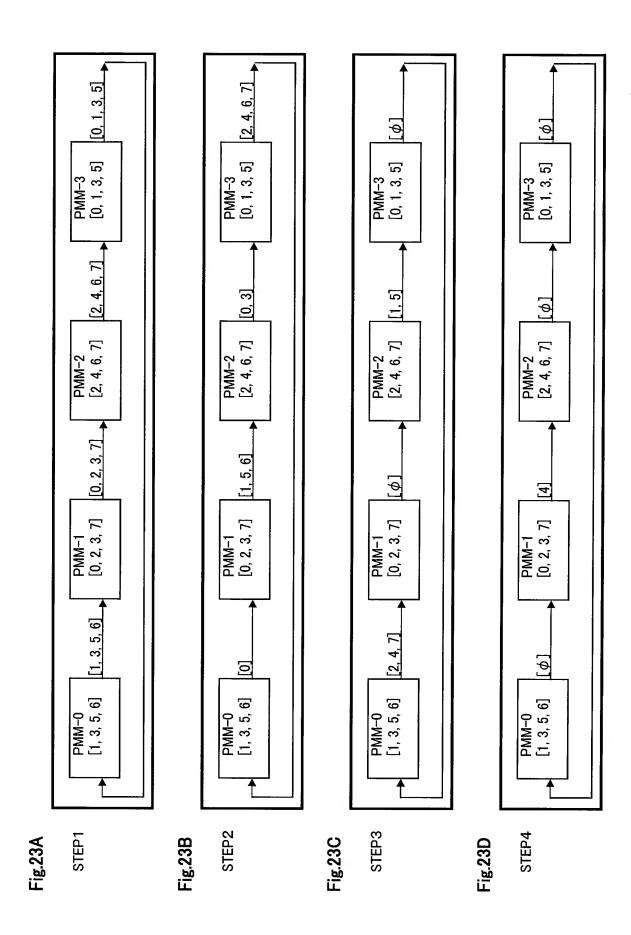


Fig.24A

	PMM-3 [2, 4, 6, 7]	
	PMM-2 [0, 2, 3, 7]	
	PMM-1 [1, 3, 5, 6]	
RECEIVED LIST	PMM-0 [0, 1, 3, 5]	
	STEP1	-

Fig.24B

	RECEIVED LIST			
STEP2	PMM-0 [0, 1, 3, 5] [2, 4, 6, 7]	PMM-1 [1, 3, 5, 6] [0]	PMM-2 [0, 2, 3, 7] [1, 5, 6]	PMM-3 [2, 4, 6, 7] [0, 3]

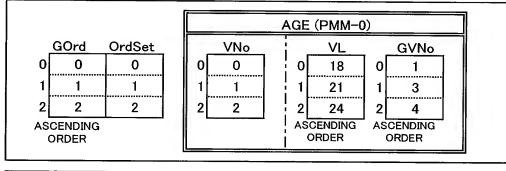
Fig.24C

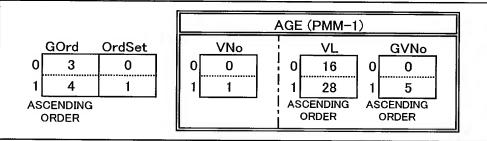
_	<u></u>
	PMM-3 [2, 4, 6, 7] [0, 3] [1, 5]
	PMM-2 [0, 2, 3, 7] [1, 5, 6] [φ]
	PMM-1 [1, 3, 5, 6] [0] [2, 4, 7]
RECEIVED LIST	PMM-0 [0, 1, 3, 5] [2, 4, 6, 7] [φ]
	STEP3

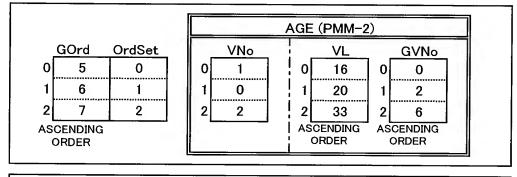
Fig.24D

	RECEIVED LIST			
	PMM-0	PMM-1	PMM-2	DMM-3
STEP4	[0, 1, 3, 5]	[1. 3. 5. 6]	[0 2 3 7]	[7 4 6 7]
	[2, 4, 6, 7]	[0]	[1,5,6,7]	[, +, c, /]
		[2 4 7]	[5,	[., c]
		[; ; ]	7-2-	., .
		_ [♣] _	<b>-</b>	9

Fig.25







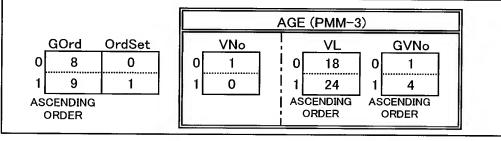


Fig.26

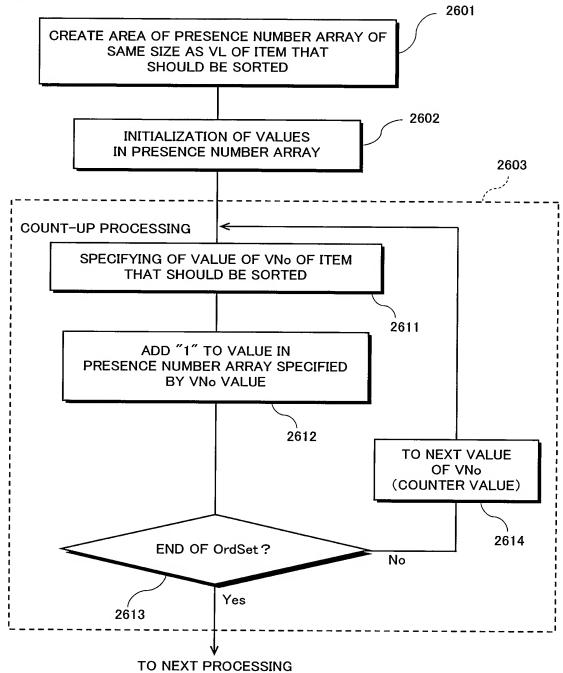
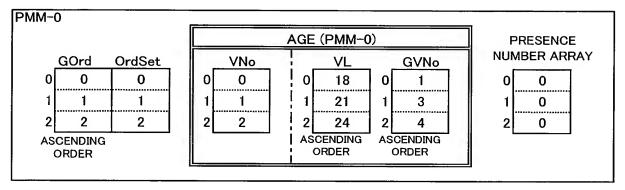
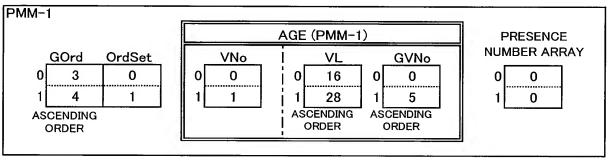
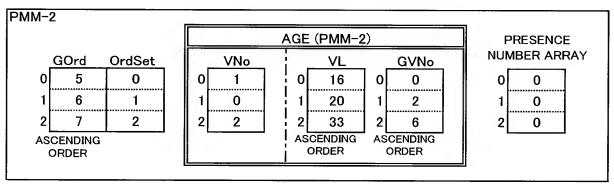


Fig.27

. . . .







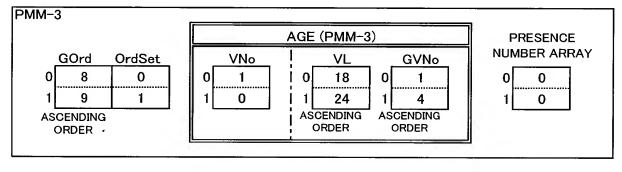
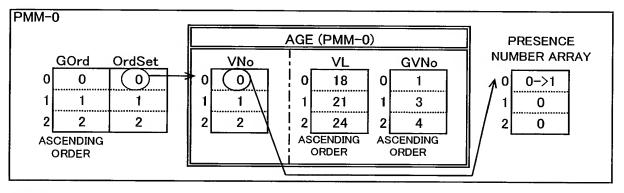
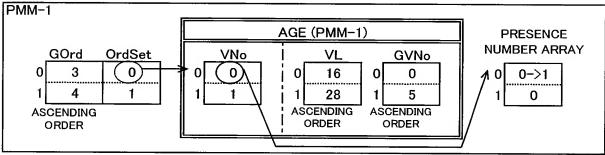
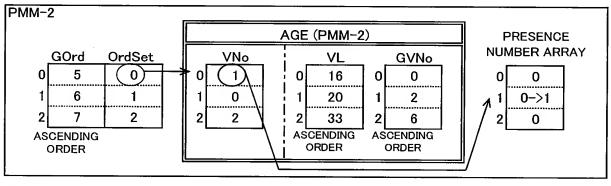


Fig.28







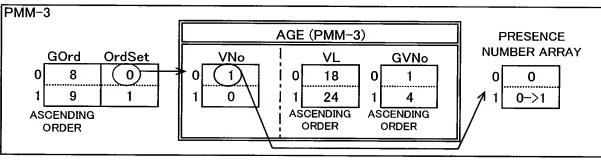
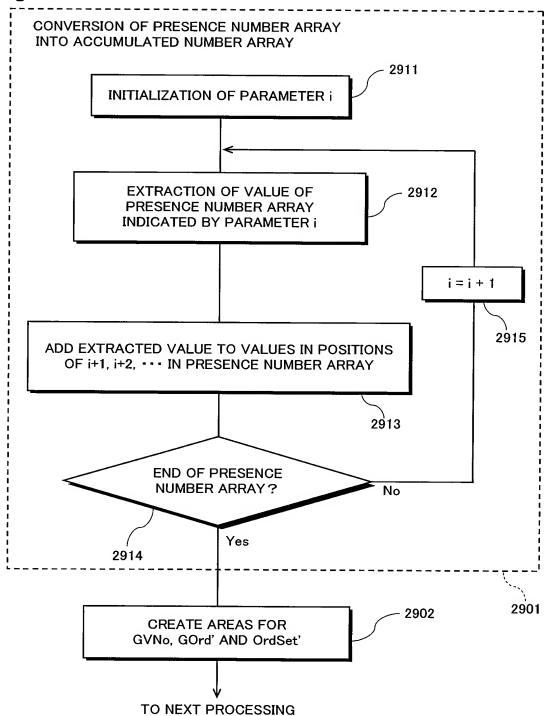
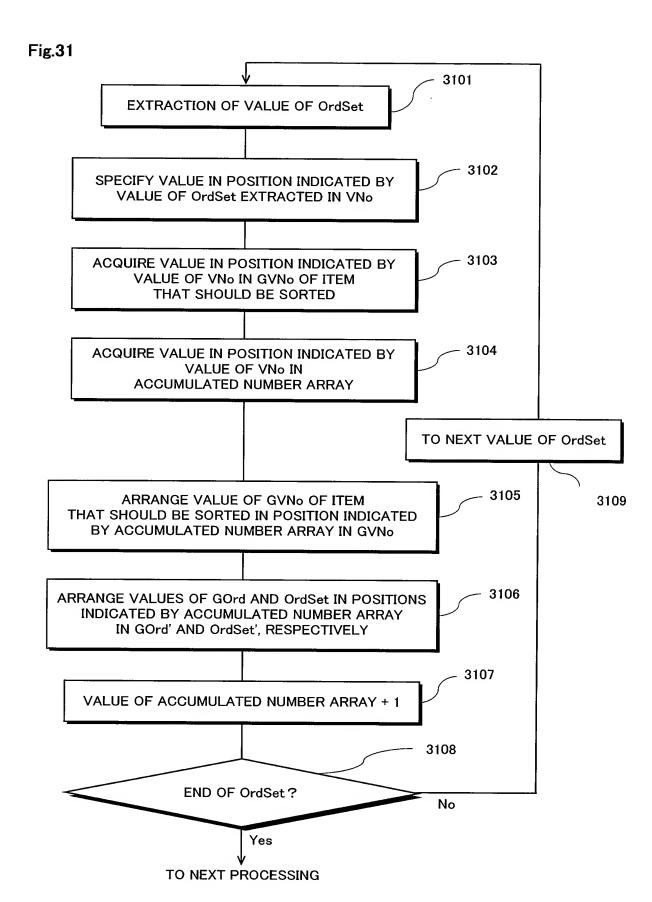


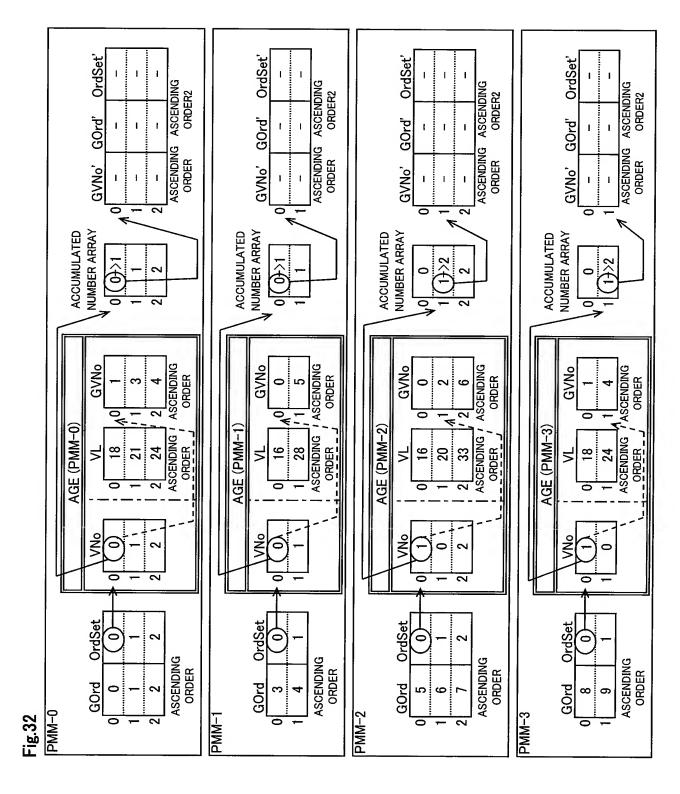
Fig.29



OrdSet' OrdSet' OrdSet' OrdSet' GOrd' GVNo' GOrd' GOrd' GOrd' ı GVNo' GVNo, GVNo, NUMBER ARRAY **NUMBER ARRAY** NUMBER ARRAY **NUMBER ARRAY** ACCUMULATED ACCUMULATED ACCUMULATED ACCUMULATED 0 -0 ~ 0 0 **NUMBER ARRAY NUMBER ARRAY** NUMBER ARRAY **NUMBER ARRAY** PRESENCE PRESENCE PRESENCE PRESENCE ASCENDING ORDER ASCENDING ORDER ASCENDING ORDER ASCENDING ORDER GVNo GVNo GVNo GVNo 2 9 4 0 AGE (PMM-0) AGE (PMM-1) AGE (PMM-2) AGE (PMM-3) ASCENDING ORDER 2 24
ASCENDING ASCENDING ORDER ASCENDING 91 28 33 8 8 24 8 16 ORDER 닛 21 ORDER  $\forall$ ᅥ ŝ ŝ % N SN> 0 0 7 0 0 OrdSet OrdSet OrdSet OrdSet 0 ASCENDING ORDER ASCENDING ORDER ASCENDING ORDER ASCENDING ORDER Gord Gord Gord Gord 0 Ŋ 9 ∞ PMM-1 PMM-2 PMM-3 PMM-0 Fig.30



. . .



OrdSet' OrdSet' OrdSet ASCENDING ASCENDING ORDER2 ASCENDING ASCENDING ORDER2 "GOrd" GOrd' GOrd' 6 က GVNo' GVNo, GVNo, NUMBER ARRAY **NUMBER ARRAY** NUMBER ARRAY ACCUMULATED ACCUMULATED ACCUMULATED 2 ASCENDING ORDER GVNo ASCENDING GVNo GVNo ORDER <u>O</u>) r AGE (PMM-0) AGE (PMM-2) AGE (PMM-1) 2 24
ASCENDING ASCENDING 18 21 ORDER 16 28 ORDER ۲  $\forall$  $\forall$ SN/ % No Š 0 7 0 0 OrdSet OrdSet OrdSet ASCENDING ORDER ASCENDING ORDER Gord Gord 6 Gord િ PMM-0 PMM-1 PMM-2

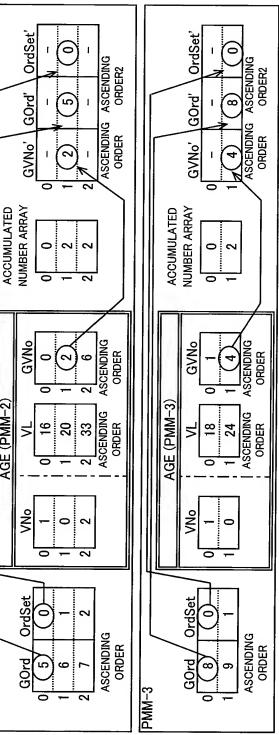
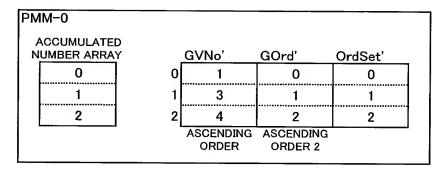
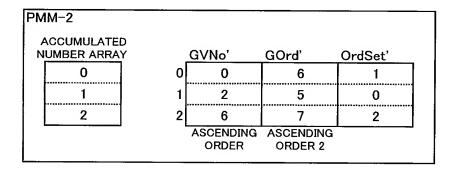


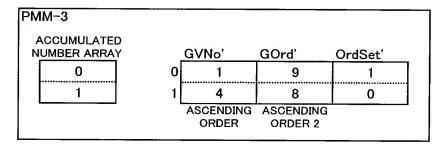
Fig.33

Fig.34



PM	IM-1					
	ACCUMULATED UMBER ARRAY		GVNo'	GOrd'	OrdSet'	
	0	0	0	3	0	
	1	1	5	4	1	
			ASCENDING ORDER	ASCENDING ORDER 2	<u>'                                    </u>	I





## Fig.35A

### ARRAY CREATION

OrdSet	GVNo OF SEX	GVNo OF AGE	GOrd
0	1	2	0
1	0	0	1
2	1	1	2

# Fig.35B

### ORDER NUMBER INITIALIZATION

OrdSet	ORDER NUMBER	
0	0	
1	0	
2	0	

## Fig.35C

## ORDER NUMBER ALLOCATION 1

OrdSet	ORDER NUMBER	
0	0→1	
1	0	
2	0→1	

# Fig.35D

### **ORDER NUMBER ALLOCATION 2**

OrdSet	ORDER NUMBER	
0	1→2	
1	0	
2	1	

## Fig.35E

### **RESULT**

ORDER NUMBER	OrdSet	GVNo OF SEX	GVN₀ OF AGE	GOrd
2	0	1	2	0
0	1	0	0	1
1	2	1	1	2

## Fig.35F

#### **RESULT**

ORDER NUMBER	OrdSet	GVN₀ OF SEX	GVNo OF AGE	GOrd
0	1	0	0	1
1	2	1	1	2
2	0	1	2	0